

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Timothy Lohse on September 20, 2011.

The application has been amended as follows:

In claim 6 line 1, change "4" to -1--.

Allowable Subject Matter

2. Claims 1-3, 7-11, and 15-23 allowed.

3. The following is an examiner's statement of reasons for allowance: The closest prior art, DeHaan et al (US 6, 278, 736, hereafter DeHaan). The prior art does not teach:

A motion estimation unit for estimating a current motion vector for a group of pixels of an image, comprising:

a generating unit means for generating a set of candidate motion vectors for the group of pixels, with the candidate motion vectors being extracted from a set of previously estimated motion vectors;

a match error unit for calculating match errors of respective candidate motion vectors; and

a selector for selecting the current motion vector from the candidate motion vectors by means of comparing the match errors of the respective candidate motion vectors, characterized in that the motion estimation unit is arranged to add a further candidate motion vector to the set of candidate motion vectors by calculating this motion vector on basis of a first motion vector and a second motion vector, both belonging to the set of previously estimated motion vectors

wherein the motion estimation unit calculates the further candidate motion vector on basis of the first motion vector and the second motion vector, with the first motion vector belonging to a first forward motion vector field and the second motion vector belonging to a second forward motion vector field, with the first forward motion vector field and the second forward motion vector field being different; and

wherein the motion estimation unit arranges to calculate the further candidate motion vector by means of calculating a difference between the second motion vector and the first motion vector.

A motion estimation unit for estimating a current motion vector for a group of pixels of an image, comprising:

a generating unit means for generating a set of candidate motion vectors for the group of pixels, with the candidate motion vectors being extracted from a set of previously estimated motion vectors;

a match error unit for calculating match errors of respective candidate motion vectors; and

a selector for selecting the current motion vector from the candidate motion vectors by means of comparing the match errors of the respective candidate motion vectors, characterized in that the motion estimation unit is arranged to add a further candidate motion vector to the set of candidate motion vectors by calculating this motion vector on basis of a first motion vector and a second motion vector, both belonging to the set of previously estimated motion vectors

wherein the motion estimation unit calculates the further candidate motion vector on basis of the first motion vector and the second motion vector, with the first motion vector belonging to a fourth forward motion vector field and the second motion vector belonging to a first backward motion vector field; and

wherein the motion estimation unit arranges to calculate the further candidate motion vector by means of multiplication of the first motion vector with a predetermined constant and summation of the second motion vector.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIKAODILI E. ANYIKIRE whose telephone number is (571)270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272 - 7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Application/Control Number: 10/501,424
Art Unit: 2482

Page 6

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